

Medical News

EDITED BY GINA PUGLIESE, RN, MS; MARTIN S. FAVERO, PhD

Risk Factors for Neurosurgical-Site Infections

Researchers from France recently reported the results of a study to determine the incidence and risk factors of surgical-site infections (SSIs) after craniotomy and to test the risk index score proposed by the National Nosocomial Infections Surveillance (NNIS) system. During a 15-month period, every adult patient undergoing craniotomy in 10 neurosurgical units was evaluated prospectively for development and risk factors of SSI. The follow-up period was at least 30 days, and all SSIs were defined according to the NNIS definitions. Incidence was calculated per patient, and multivariate analyses were conducted to include all significant risk factors. The NNIS surgical-wound risk index then was tested in this population.

Out of a total of 2,944 patients, 117 patients (4%) with SSIs were observed, including 30 with wound infections, 14 with bone flap osteitis, 56 with meningitis, and 17 with brain abscesses. Independent risk factors for SSIs were postoperative cerebrospinal fluid leakage and subsequent operation. Independent predictive risk factors were emergency surgery, clean-contaminated and dirty surgery, an operative time longer than 4 hours, and recent neurosurgery. Absence of antibiotic prophylaxis was not found to be a risk factor.

The authors concluded that the NNIS risk index was effective in identifying at-risk patients, and independent risk factors for SSIs after craniotomy involve postoperative events.

FROM: Korinek AM. Risk factors for neurosurgical site infections after craniotomy: a prospective multicenter study of 2,944 patients. The French Study Group of Neurosurgical Infections, the SEHP, and the C-CLIN Paris-Nord. Service Epidemiologie Hygiene et Prevention. *Neurosurgery* 1997;41:1073-1079.

Hepatitis B and Liver Transplantation

Scientists from the University of Virginia Health Sciences Center in Charlottesville and the National Institutes of Health have reported a study to evaluate the risk of acquiring hepatitis B virus (HBV) infection among transplantation recipients of livers from donors without serum hepatitis B surface antigen (HBsAg) but with antibody to hepatitis B core antigen (anti-HBc).

The transplantation experience of four centers between 1989 and 1994 was reviewed. Recipients of livers from 674 donors were evaluated for HBV transmission. HBV developed in 18 of 23 recipients of livers from anti-HBc-positive donors (78%) compared with only 3 of 651 recipients of anti-HBc-negative donor livers (0.5%; $P < .0001$). HBsAg persisted in all recipients with donor-related HBV. Liver histology showed chronic hepatitis of moderate severity in 2 of 13 recipients at 1 year and 5 of 8

recipients between 1.6 and 4.5 years from transplantation. Liver transplantation from an anti-HBc-positive donor was associated with decreased 4-year survival.

The authors concluded that post-transplantation HBV infection occurs at a high rate in recipients of donors with anti-HBc. Transmission of HBV through transplantation suggests that the virus may persist in the liver despite serological resolution of infection.

FROM: Dickson RC, Everhart JE, Lake JR, et al. Gastroenterology transmission of hepatitis B by transplantation of livers from donors positive for antibody to hepatitis B core antigen. *The National Institute of Diabetes and Digestive and Kidney Diseases Liver Transplantation Database* 1997;113:1668-1674.

Cryptosporidiosis and Child-Care Facilities

Investigators from the Hospital Infections Program, CDC, conducted a study on the impact of the 1993 waterborne cryptosporidiosis outbreak on metropolitan Milwaukee child-care homes and child-care centers. Information on outbreak-related illness and changes in policies and practices was collected from directors of 117 facilities. Stool specimens from 129 diapered children from 11 centers were screened for *Cryptosporidium*. Most facility directors (74%) reported children or staff with diarrhea during the outbreak; however, only four facilities (3.4%) closed because of illness among staff or children. During the outbreak, child-care homes were less likely to exclude children with diarrhea than were child-care centers. Among diapered children attending centers, the *Cryptosporidium* prevalence was 30%; 29% of infected children had no history of diarrhea associated with the Milwaukee outbreak.

Facilities continued to operate during the outbreak despite considerable illness among children and staff. The news media were an effective means for providing public health information to child-care facilities. Although secondary transmission undoubtedly took place in child-care facilities, the presence of children with asymptomatic *Cryptosporidium* infections did not result in an increased risk of diarrhea in infant and toddler rooms.

FROM: Cordell RL, Thor PM, Addiss DG, et al. Impact of a massive waterborne cryptosporidiosis outbreak on child care facilities in metropolitan Milwaukee, Wisconsin. *Pediatr Infect Dis J* 1997;16:639-644.

Additional news items in this issue: INH for HIV-Infected Persons With Anergy at Risk for TB, page 16; CJD Update, page 22; Chlamydia and Risk of Coronary Artery Disease, page 27; MDR TB Trends in US, page 37; Costly Consequences of Multiple Misdiagnosis of TB, page 40.



The Society for Healthcare Epidemiology of America

1998 SHEA/IHI Improving Healthcare Through Clinical Epidemiology and Quality Improvement

Program

The second collaboratively sponsored course by SHEA and the Institute for Healthcare Improvement is scheduled to take place at the Marina Beach Marriott, February 7-9, 1998. Topics will include the role of quality improvement in contemporary healthcare, applying clinical epidemiology to prevention and control of adverse events (such as nosocomial infections and medication errors), using total quality management and statistical process control to improve surgical outcomes and reduce practice variation, improving meetings in real time, investigating special cause problems and outbreaks, measuring patient opinions, outcomes and reduce practice variation measurement and report cards, clinical decision aids and practice guidelines, measuring appropriateness of care, choosing and implementing a major healthcare improvement initiative, and data systems to support improvement. The course will prepare the participant to apply basic epidemiology, outcome measurement and quality improvement in their healthcare environment.

Who Should Attend

Both quality improvement and clinical epidemiology can provide healthcare professionals with powerful techniques to analyze and improve processes and outcomes of care. Unfortunately, individuals involved in improving care generally are not knowledgeable in both of these fields. This course will use lectures, interactive seminars, interactive storyboards, and hands-on problem solving exercises to teach participants specific QI statistical process control and epidemiology techniques, and will demonstrate how these tools can be used synergistically to improve infection control and other healthcare systems.

General Course Information

Information regarding the schedule, hotel and travel accommodations, discount airfare, and course fees are available from SHEA (609) 423-3195.

Funds provided by an educational grant from Bayer Pharmaceutical.



Pharmaceutical
Division

1998 SHEA/CDC Training Course in Hospital Epidemiology

Program

The program will be held May 16-19, 1998 at the Omni Inner Harbor Hotel in Baltimore, Maryland. Timothy W. Lane, M.D., William R. Jarvis, M.D., and Gina Pugliese, R.N., M.S., will co-chair the program. This program, developed by the Society for Healthcare Epidemiology of America (SHEA), and the Centers for Disease Control and Prevention (CDC), is intended for infectious disease fellows and new hospital epidemiologists. It emphasizes hands-on exercises in which participants work in small groups to detect, investigate, and control epidemiological problems encountered in the hospital setting. These work sessions are supplemented with lectures and seminars covering fundamental aspects of hospital epidemiology and surveillance, epidemic investigation, transmission and control of nosocomial infections, disinfection and sterilization, employee health, isolation systems, regulatory compliance, and quality improvement.

Who Should Attend

You should attend if you are a hospital epidemiologist or an infection control practitioner or if you are looking for a course that will provide you with the most current information concerning infection control practices and epidemiological methods in health care. This fundamental program will provide you with opportunities to find solutions to real situations that will occur in the hospital setting. Intensive problem solving sessions are supplemented with lectures and seminars presented by leading authorities.

Scholarships

Scholarships in the amount of \$1,000 will be awarded to up to seven infectious disease fellows for the program to defray the special course fee for fellows of \$350 and expenses incurred in attending the training program.

Interested fellows must submit a letter of no more than one page describing why they would like to have additional training in hospital epidemiology. A letter from the fellow's program director outlining the applicant's qualifications and suitability for the course also is required. The deadline for receipt of scholarship applications for the course is April 1, 1998.

The SHEA Educational Activities Committee will select the scholarship recipients based on review of these letters. Winners will be notified in April.

Nominations

Please send scholarship applications to:

Timothy W. Lane, M.D.
c/o The Society for Healthcare Epidemiology of America
19 Mantua Road
Mt. Royal, NJ 08061

Fees

Individual Registrants	\$495
Fellows in Infectious Disease	\$350

Credits

The Society for Healthcare Epidemiology of America (SHEA) is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The Society for Healthcare Epidemiology of America designates this continuing education activity for up to 23 hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

General Course Information

Information regarding the schedule, hotel and travel accommodations, discount airfare, and course fees are available from SHEA (609) 423-7222. Note that application for a scholarship does not constitute enrollment in the program. This must be done separately.

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